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ABSTRACT

This study attempted to assess directly whether children who had had an imaginary companion were significantly different from those who had not, in intelligence, creativity, and waiting ability, each of which had been identified in previous research as an important correlate of this phenomenon. A total of 84 children participated in this study, half of whom had been identified as having an imaginary companion and half of whom had been identified as not having one. The two groups had an equal number of boys and girls, did not differ significantly in subjects' age (average 5 years 9 months) or socioeconomic status (predominantly middle class), and were matched to ensure equal numbers of only children, first borns, and later borns. Each child was tested at home in his own room with the Peabody Picture Vocabulary Test to measure intelligence, the Uses Task and Abstract Patterns Task to measure creativity, and a modification of Singer's (1961) waiting ability task. There were no significant differences between the two groups on any of the three measures. Discrepancies between the findings of this study and those of the other studies cited in this paper were attributed to methodological differences. (Author/JMB)

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The Relationship of Imaginary Companions in Young Children to Intelligence, Creativity, and Waiting Ability[1]

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THE RELATIONSHIP OF IMAGINARY COMPANIONS IN YOUNG CHILDREN TO INTELLIGENCE, CREATIVITY, AND WAITING ABILITY[1]

Several commonly observed and important aspects of children's development have been relatively ignored by developmental psychologists. Included in such neglected topics are, among others, children's play, fantasy, humor, and dreams. While of substantial interest to clinicians and folklorists, these topics have rarely been the subject of systematic research by developmental psychologists until recently. Currently more research is being devoted to these areas on the assumption that their recurrent appearance in normal childhood suggests that they serve important adaptive functions that have been slighted.

The study of fantasied or make-believe characters of young children represents one of these neglected topics, and it is one that we have become interested in. Imaginary companions represent an intriguing phenomena in and of themselves, but beyond this, the study of such fantasy phenomena may also lead to important advances in understanding selected aspects of cognitive and affective development. In addition to our study of imaginary companions, we have recently begun to broaden our research to include other imaginary characters, such as Santa Claus, the Tooth Fairy, and the Easter Bunny.

Indeed the majority of papers published on these topics (and the literature is scant) have been single case studies focused on the psychopathological aspects of such fantasy characters as revealed in therapeutic work with emotionally disturbed children. Such work has reflected the historical emphasis

in child psychoanalysis on the importance of fantasy as a medium of communication in the diagnostic and therapeutic work with young children. The empirical study of fantasy characters as adaptive normative developmental phenomena has largely been unexplored. Rather, the unsystematic observation, the clinical case history, and retrospective accounts have been the rule. Not withstanding the value of such studies as therapeutic guidelines, or as rich sources of hypotheses, such literature provides an insufficient data base to clarify these phenomena as normative developmental experiences. To accomplish such an objective necessitates the conduct of systematic studies using non-clinical populations.

A more extensive discussion of the previous literature on imaginary companions can be found in our previous publication (see Manosevitz, Prentice, & Wilson, 1973). In that paper we reported data on the presence of imaginary companions and family structure, play behavior, personality characteristics, behavior problems, and descriptive data about imaginary companions. Interestingly enough a sizeable proportion of these 3-5 year old children (about 28%) who were drawn from a non-clinical population were found to have imaginary companions. One might think that such an extensive phenomena would have drawn more attention than it has from developmental psychologists, but it has not. Today we will present data obtained in a follow-up study of a randomly selected group of children drawn from the original sample we studied.

The purpose of this follow-up was to assess the relationship between having had an imaginary companion and intelligence, creativity, and waiting ability, all of which have been previously described as important correlates of this phenomena. With respect to intelligence a number of writers have

assumed that more intelligent children are more likely to have imaginary companions or to have more vivid ones and to give more elaborated stories about them (Ames & Learned, 1946; Bender & Vogel, 1941; Breckenridge & Vincent, 1965; Nagera, 1969). However, this assumption has not been tested directly. Four studies have been reported in which this assumption has been studied indirectly. Jersild, Markey, and Jersild (1933) reported higher IQ scores for five to twelve year old children who could describe an imaginary companion than for those who could not. They noted that children in the comparison group may have had imaginary companions but lacked the verbal competence to describe them. However, neither the mean ages of the two groups nor other important characteristics relevant to evaluating this assumption were reported. Bairdain (1959) found no significant difference in IQ between a group of high school students who could recall having had an imaginary companion and a group who could not. Failure to recall the presence of an imaginary companion could have lead to erroneous groupings of subjects. Singer (1961) failed to find significant differences in IQ between his high fantasy group of six to nine year olds and a comparative low fantasy group, but IQ's were not available for all subjects. All three of these studies apparently relied on school or other records for IQ data. Svendsen (1934) reported a higher mean IQ for a group of three to sixteen year olds who had imaginary companions than for a sixth grade comparison group. However, four different individual intelligence tests were used in testing the subjects who had imaginary companions while the Otis group test was used with the comparison group.

Selection biases may have operated since the imaginary companion group was obtained from a mother's group which was told that imaginary companions were thought to be characteristic of intelligent children. In sum, all four of these studies have methodological deficiencies and thus the relationship between intelligence and imaginary companions remains inconclusive.

Children who have imaginary companions have also been assumed to be more creative (Kohut, 1960; Harriman, 1937). Several studies have investigated the relationship between various indices of fantasy and various creativity tasks (see Wallach, 1970). In only one study (Schaefer, 1969) was the relationship between creativity and having had an imaginary companion directly studied. Schaefer concluded that having had an imaginary companion may be associated with creativity, particularly literary creativity. However, Schaefer's results were based on retrospective self-report by the adolescents. Moreover, the definition of an imaginary companion was not given. Thus, a more direct test of the assumed relationship between creativity and having had an imaginary companion was undertaken in the current study.

In addition, some investigators have suggested that imaginative capacity is associated with the ability to delay gratification and bind time, or with what Singer (1961) has called "waiting ability". Presumably, children high in imaginative capacity are able to provide for themselves a richer inner experience during the waiting period. This experience purportedly enables them to wait longer than those who do not have this inner resource to draw upon to bind time. Singer (1961) reported that children

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high in fantasy waited longer than those low in fantasy. His waiting time task requires a child to sit or stand quietly for a period of time without changing positions. The children were told that the experimenters were studying space flight and they wanted to see how long children could sit still in a rocket ship. In a later study Singer (1966) showed that children disposed to daydreaming could wait longer in his rocker ship task than those low in daydreaming disposition. On the basis of these results, we expected that children who had imaginary companions would be able to wait longer than those who did not.

In summary, the purpose of the present study was to assess directly whether children who had imaginary companions were significantly different in intelligence, creativity, and waiting ability than those who had not.

METHOD

Subjects

The subjects in this study were 42 children from the imaginary companion group and 42 children from the non-imaginary companion group previously identified by Manosevitz, et al., (1973). The experimenter, at the time of testing, did not know whether or not the subject being tested was in the imaginary companion group. The two groups did not differ significantly in age, or socio-economic status. They averaged 5 years 9 months at time of testing and were predominately middle class with an equal number of boys and girls in each group. The two groups were matched to insure equal numbers of only children, first borns and later borns.

Instruments and Materials

Creativity: Uses Task and Abstract Patterns Task. These two tests were developed by Wallach and Kogan (1965a, 1965b) and adapted by Ward (1968, 1969) for use with preschool children. They were administered to all subjects, using Ward's procedure. In the Uses task the child is instructed to "tell me all the things you can think of that you can do with a pencil or things you can play with a pencil or things you can make with a pencil. What can you use a pencil for?" Additional Uses items were newspaper, table knife, cup and coat hanger. Each child was handed the object as the questions were asked.

The stimuli for the Patterns task were nine abstract patterns drawn in black on 4 X 6 inch white index cards. Each card was handed to the child in sequence and the child was asked "Tell me all the things you think it could be a picture of. What does it look like to you? What do you think it could be?" These tests were untimed. When the child stopped giving responses, the next item was presented.

Each protocol was scored for quality, originality, and fluency. Quality of response was rated by using the following categories: irrelevant, low, medium, or high quality. The judges were instructed to score quality in terms of their own standards of appropriateness and aesthetic appeal. Originality was scored according to how many children gave the same response or one highly similar. The less frequent a response, the higher the originality score. Fluency was defined as the total number of responses given minus those previously removed from the protocol as incomprehensible, repetitious, or irrelevant. Total scores for each variable

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(e.g., quality, originality, and fluency) across items and across tests were computed. Two judges rated all responses. Each response was scored independently from all other responses. Inter-judge agreement was quite high (ranging from 70-90 percent).

Intelligence: Peabody Picture Vocabulary Test. Form A was administered and scored following the method described by Dunn (1965).

Waiting Ability. A modification of Singer's (1961) waiting ability task was used. Pilot work indicated that his space flight procedure was frightening to some of the younger children in our study. We also thought that the task might have more intrinsic appeal to boys than to girls. Therefore, a car driving game was substituted for the rocket ship. All children were seated on the floor during this task. A piece of cardboard 5 feet by 3 feet was folded to make a screen which was placed in front and around the child. In this way the visual stimuli were controlled. Each subject was told how the car driving game was played. The experimenter sat behind the subject during this task so that she could observe the child. She recorded the number of seconds from start to the time the subject spoke, turned around, or stood up.

Procedure

Each subject was tested at home and in the privacy of his own room with the door closed. The experimenter spent a few minutes establishing rapport with the child. The child was invited to show the experimenter his room, favorite toys, and to play some games with the experimenter. Each child was told that when the games were over, he would get two little

prizes. Each child was given the Uses task, the Pattern task, the Peabody, and then the Waiting task. After the creativity tasks each child picked a balloon as one of his prizes. A box of crayons was given to each child after the last test. The testing session took between 30 and 60 minutes.

RESULTS

The intelligence, creativity and waiting time mean scores and standard deviations are summarized in Table 1. There were no significant differences between the two groups on any of the three measures. There were no significant differences between the two groups on the six components of the creativity measures: quality, originality or fluency.

Insert Table 1 about here

As shown in Table 1, the subjects in both groups were above average in intelligence. The subjects who did have an imaginary companion had higher mean IQ scores than those who did not. This difference was not significant and was in the opposite direction of our expectation. The scores on the creativity measures were highly similar for both groups. The average number of seconds spent waiting was higher for the subjects in the imaginary companion group than in the non-imaginary companion group, as we had expected. However, due to the large variability on this measure the difference was not statistically significant.

Significant and positive correlations were found among the creativity measures but not between the creativity and intelligence measures. For

example the Uses fluency and Patterns fluency scores correlated quite substantially ($r = .66$, $p < .001$); while Uses originality and Pattern originality correlated moderately ($r = .29$, $p < .01$); Uses quality and Patterns quality correlated .23 ($p < .05$). The Uses total score correlated .57 ($p < .001$) with Patterns total. However, as expected, there were no significant correlations between Peabody intelligence scores and any of the creativity measures. (The range of these correlations was .18 — -.05).

Age was significantly correlated with several of the creativity scores (.30 - .40) and with waiting time (.35, $p < .001$).

The present data provided good support for the convergent and discriminant validity of the creativity measures used and the results are in general agreement with those reported by others who have studied creativity in young children.

There were no significant differences on any measures as a function of sex, socio-economic status, or birth order.

DISCUSSION

The assumption that children that had imaginary companions are more intelligent than those who did not was not supported by the data in this study. These results are consistent with two previous studies (Bairdain, 1959; Singer, 1961). The present study, along with those of Bairdain and Singer, provide three different procedures for classifying subjects into the imaginary companion and non-imaginary companion groups (parental reports, direct questioning of child, and adolescents recall of their childhood). All three of

these studies found no IQ differences between groups. The two studies (Jersild, et al., 1933; Svendsen, 1934) that provided limited evidence for the assumption had a number of methodological weaknesses and thus the results from these studies could have been confounded by other variables.

The data do not support the assumption that children who had imaginary companions were more creative than those who did not. This contradicts the results reported by Schaefer (1969) and Singer (1961). This inconsistency may be accounted for by differences in the samples, age of subjects, or methods used to measure creativity. In the present study creativity was defined as the ability to produce many unusual and distinctive responses appropriate to the task. Schaefer and Singer used measures that can be considered as more literary creativity, which might represent simply an additional measure of fantasy. In this connection Wallach (1970) has distinguished elicited fantasy from creativity. Clearly we would expect elicited fantasy, as well as other measures of fantasy, to be associated with having had an imaginary companion, since having an imaginary companion represents a special type of fantasy creation.

The results from the waiting ability task are not consistent with those reported by Singer (1961) for his high fantasy subjects. This may be due to the modifications introduced in the task for the present study, age differences since Singer's children were older, or due to the criterion used to classify subjects. The present study relied on parental report concerning the presence or absence of imaginary companions to classify subjects. Singer directly questioned his subjects and, moreover, only one of his four questions to the child dealt with make-believe characters. Thus, Singer used a much broader

range of fantasy phenomena to classify subjects. However, in the current study, a specific definition of an imaginary companion was used and parents were asked to indicate if they observed such a fantasy character in their child. Parental reports would not be expected to be identical to self-reports from children, such as those obtained by Singer. Indeed in a dissertation recently completed by Linda Schmechel (1975), direct questioning of the child produced a higher frequency of imaginary companions (50 percent) than did parental report (31 percent). Further systematic studies of the procedure by which presence or absence of imaginary companions are established are clearly needed.

The results from the present study suggest a reevaluation of earlier findings and assumptions about children who have imaginary companions and their cognitive and affective development. It is reasonable to assume that significant differences exist between children who had imaginary companions compared to those who did not. Further study of family variables, including child-rearing practices, and personality characteristics of children who had imaginary companions will be required to identify these differences as well as to explore their relevance for later development.

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TABLE 1

Mean IQ, Summed Creativity Scores, and Waiting Time for Children Who Had an Imaginary Companion Compared to Those Who Did Not

Variable	IC (n = 42)	non IC (n = 42)	t
IQ			
M	110.6	114.7	1.52
SD	11.8	13.0	
Uses total			
M	152.4	145.7	.95
SD	22.1	24.3	
Patterns total			
M	149.1	150.9	.39
SD	17.9	23.6	
Uses + Patterns total			
M	301.5	298.4	.36
SD	34.7	43.4	
Waiting time			
M	215.4	171.3	.90
SD	247.4	198.0	

Note. Creativity raw scores were converted to standard scores to allow summary and comparison.

Footnotes

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